Ordering number : EN 725F

Monolithic Linear IC



No.725F

LA7800

Color TV Synchronization, Deflection Circuit

The LA7800 is a multifunctional IC containinig various required for synchronization, deflection of color television sets. This IC has been developed under the design concept that the basic characteristics should be made more complete and the television sets with this IC incorporated should be streamlined by making the device compact (DIP-16) and by minimizing the number of parts required.

Functions

- Synchronizing separation
- Horizontal AFC
- Horizontal oscillation
- Vertical oscillation
- Vertical drive
- X-ray protection
- Vertical blanking

Features

- Multifunction and compact(DIP-16)
- Minimum number of parts required
- Horizontal, vertical oscillators are stable against variations in ambient temperature and supply voltage due to small warm-up drift.
- Small variation in horizontal oscillation frequency
- Good linearity and interlace because DC bias at vertical output stage is subjected to sampling control within retrace time.
- Vertical blanking pulse width can be set freely according to peripheral parts.

Maximum Ratings at Ta = 25°C

				unit
Maximum Supply Voltage	V_{12}		14	V
Maximum Supply Current	I_{15}		16	mA
Allowable Power Dissipation	Pd max	Ta = 60°C	450	mW
Operating Temperature	Topr		−20 to +85	°C
Storage Temperature	Tstg		−55 to +125	°C

Recommended Operating Condition at Ta = 25°C

			unit
Recommended Supply Voltage	V_{12}	12	V

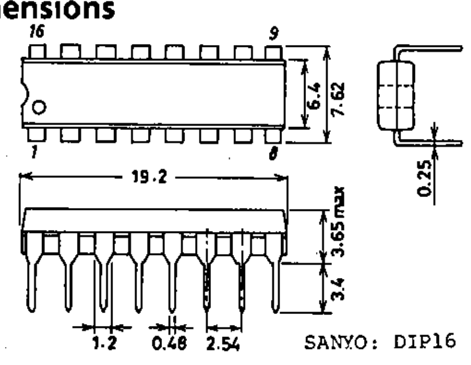
Operating Characteristics at Ta = 25°C, V_{12} = 12V, $I_{CC}15$ = 13mA

			min	typ	max	unit
$V_{CC}12$ Current Dissipation	$I_{CC}12$		13.0		20.0	mA
$V_{CC}15$ Supply Voltage	$V_{CC}15$		11.8		13.2	V
Vertical Frequency Pull-In Range			9.0		11.0	Hz
Vertical Free-Running Frequency	f_V	f_V center 55Hz	50		60	Hz
Supply Voltage Dependence of Vertical Frequency		V12 = 12±1V, 55Hz at 12V	−0.5		0.5	Hz
Temperature Characteristic of Vertical Frequency		Ta = −10 to +60°C	−0.028		0.028	Hz/°C

Continued on next page.

Package Dimensions

(unit : mm)
3006B



SANYO Electric Co., Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

Continued from preceding page.

			min	typ	max	unit
Vertical Driver Amplification Factor			4.0		7.0	deg
Horizontal Free-Running Frequency	f_H	f_H center 15.734kHz	−750		750	Hz
Supply Voltage Dependence of Horizontal Frequency		$V_Z - V_Z \times 90\%$	−50		50	Hz
Temperature Characteristic of Horizontal Frequency		Ta = −10 to +60°C	−3.4		3.4	Hz/°C
Horizontal Output Pulse Width		f_H = 15.734kHz	21.5		26.5	μs
Horizontal Output Drive Current			3.8		7.2	mA

P_d max − T_a

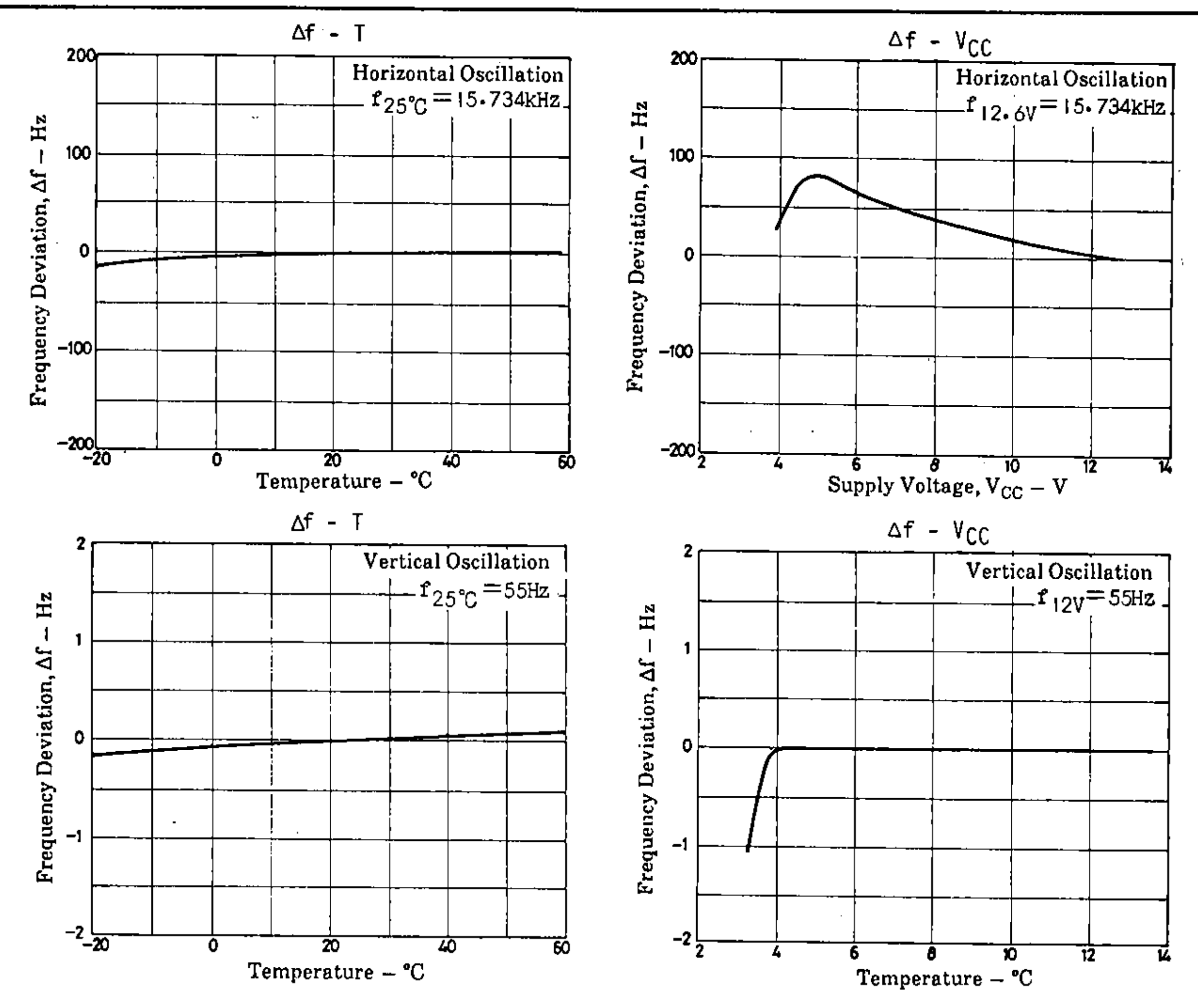
Allowable Power Dissipation, Pd max − mW

Ambient Temperature, Ta − °C

Sample Application Circuit

Unit (resistance: Ω, capacitance: F)

Note) 1. The vertical output circuit is represented by the basic circuit.
2. The peripheral parts connected to pin 8 are changed according to the Ver.Out circuit conditions.
3. The limit resistor (220Ω: 1Vp-p) connected to pin 14 is changed according to the magnitude of the input video signal.
4. The time constant circuit (120kΩ, 4.7μF) connected to pin 14 is such that the resistor is changed according to the DC level of the input video signal and the time constant is changed with the capacitance value.



Note) The Temperature characteristic of oscillation frequency represents the one for IC itself without peripheral parts.

■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:

② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.